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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/630,902	08/02/2000	Jayant D. Patel	7784-000135	7985

7590 10/22/2002

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PO Box 828  
Bloomfield Hills, MI 48303

EXAMINER

HOOK, JAMES F

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 10/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/630,902**

Applicant(s)  
**Patel**

Examiner  
**James F. Hook**

Art Unit  
**3752**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jul 8, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above, claim(s) 9-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 16-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Caplan.

The patent to Caplan discloses the recited duct assembly and method of assembling it comprising a first portion 30 which is non-corrugated and therefore stiffer than a second portion 31 provided with corrugations, where the two parts are connected together, a support collar 35 surrounds the first portion adjacent the second portion and covers and holds a reinforcing wire 35 over part of the first portion and the entire second portion, in some figures the end is shown to have a larger diameter than the remaining section of the tube, and can be formed with a beaded end portion 50, where inherently the support collar and reinforcement would protect the first and second portions from any build up of stress, and it is also considered inherent that upon making the article one would have to select a diameter and a pitch based on the diameter to form the article as required in claim 16, and where the second portion can be covered with a cover layer 78.

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***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18, 20, 21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan in view of Sindars. The patent to Caplan discloses all of the recited method of assembly with the exception of forming the tube from three separate sections that are connected together to form the tube. The patent to Sindars discloses the recited method of forming a tube comprising sections having corrugations 82 and sections without corrugations 88 where the corrugated sections are separate from the uncorrugated sections and are connected together to form the tube. It would have been obvious to one skilled in the art to form the tube in Caplan using the method of providing separate corrugated and uncorrugated portions and connecting them together to form the hose as such is an equivalent method of providing a corrugated section which is another known method in addition to just forming a tube with a corrugated portion as suggested by Sindars.

5. Claims 7, 8, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan. The patent to Caplan discloses all of the recited structure with the exception of specific dimensional qualities of the diameter of the end portion and length of the end portion, however such are considered obvious choices of mechanical expedients. It would have been obvious to

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one skilled in the art to modify the diameter and length of the end portion to be of any dimensions as such would only require routine skill in the art to modify the dimensions of the tube ends to meet environmental needs using routine experimentation to arrive at optimum values.

6. Claims 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan in view of Sindars, as applied to claims 18, 20, 21, and 23-25 above, and further in view of Roberts. The patent to Caplan as modified discloses all of the recited structure with the exception of forming the cover layer of a rubber sleeve. The patent to Roberts discloses the recited duct assembly comprising an inner rubber layer 23 which has a first section having no corrugations 20, and a second portion having corrugations 21, where a reinforcement coil 29 reinforces the second portion, and a cover layer in the form of a rubber sleeve 24 is provided over the reinforcement to protect it. It would have been obvious to one skilled in the art to modify the cover layer in Caplan as modified to be formed of a rubber material as such is an equivalent sleeve used to protect the reinforcements over corrugated sections of tubes as suggested by Roberts, where the rubber is known to be more flexible than thermoplastics.

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan in view of Sindars, as applied to claims 18, 20, 21, and 23-25 above, and further in view of Vohrer. The patent to Caplan as modified discloses all of the recited structure with the exception of forming the reinforcement of a thermoplastic material. The patent to Vohrer discloses reinforcing a corrugated duct member 4 with a spiral reinforcement 2 which can be made of a thermoplastic material. It would have been obvious to one skilled in the art to modify the reinforcement in

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Caplan to be made of a thermoplastic material as suggested by Vohrer as such would provide the benefit of not rusting and being cheaper than metal wires used for reinforcement.

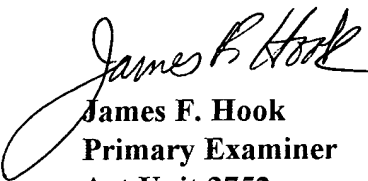
***Response to Arguments***

8. Applicant's arguments filed July 8, 2002 have been fully considered but they are not persuasive. With respect to the arguments directed toward the teachings of Caplan, the helical reinforcing wires are provided on the outside of the tube and then embedded therein, but not totally embedded in the layer, therefore it is considered to meet the limitation of being provided on the outer surface, and because it spans from one section to another it meets the claim limitation of abutting the first section as currently being claimed. With respect to claim 16, the reinforcement has a pitch that is the same as the corrugations pitch and is decided prior to making the article so that the reinforcement can be placed in the mold, therefore it is considered to meet the limitations of the claim that a reinforcement pitch is selected to fit the diameter of the tube because inherently one has to choose the pitch of the reinforcement to match the final tube so it can be placed in the mold. The arguments directed toward claims 18, 20, 21, and 23-25 are moot in view of the new rejection above.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Hook whose telephone number is (703) 308-2913.

J. Hook  
October 21, 2002

  
**James F. Hook**  
**Primary Examiner**  
**Art Unit 3752**